In this form if the prostate is so much enlarged that one cannot feel the upper border through the rectum, it is better to do a suprapubic operation. In case of "ball valve" outgrowth or pedunculated median lobe, it is also better to remove it through a suprapubic wound. In the second variety, there may be some increase of glandular tissue, but the enlargement is mainly due to an overgrowth of fibrous tissue, and is very frequently firmly adherent to the capsule, probably as the result of inflammatory changes. In some cases there is merely a fibrous enlargement of the middle lobe, raising the inlet of the bladder or a ring of fibrous tissue, Goodfellow's so-called "doughnut hypertrophy," compressing the neck of the bladder and interfering greatly with the evacuation of the urine and still by a physical examination through the rectum, not much enlargement is found. In other cases the enlargement of the lateral lobes progresses toward the rectum. These forms are very difficult and in some cases impossible to remove through the bladder and therefore a perineal operation is preferable. There are intermediate forms with both an increase of glandular and fibrous tissue, but one can make a general rule that if the glandular tissue predominates, the mass will be more apt to encroach in the bladder, and it will be easier to operate from above, while if the fibrous tissue is in excess, it will be much easier to enucleate from below through the perineum.

The prostatic urethra is frequently removed in both operations, but this usually makes no difference in the functional result. The neck of the bladder is not so liable to be injured by the suprapubic method and therefore there is less danger of incontinence of urine afterward. Drainage of the bladder is better through a suprapubic wound, and this wound closes more rapidly than the wound left after an extensive perineal operation. On the other hand the suprapubic operation is longer, there is more shock and more danger of pulmonary complications.

The danger from sepsis however is greater following perineal operations. The mortality is higher in suprapubic cases. In 243 cases of suprapubic prostatectomy collected by Watson, the mortality was 11.5%, whereas in 530 perineal cases, the mortality was only 6.2%. The causes of death were sepsis, shock, uremia or some pulmonary complication. The end results according to Watson's tables were suprapubic 66% cured, 90% good results; perineal, 60% cured, 88% good results.

Complications such as orchitis, incontinence of urine or permanent fistula, 6% in suprapubic cases, while in perineal cases the percentage was 7.2. Squier says that post operative incontinence is an unknown accident, following a properly performed suprapubic enucleation of the prostate.

Although the mortality is slightly higher, the end results are more favorable in suprapubic cases. The choice of operation should be the suprapubic for all cases where the prostate can be successfully removed from above, and where the patient will be able to withstand the shock of a longer operation, with increased time in bed; but in cases of small fibrous prostate, where the obstruction is produced principally by an enlarged middle lobe or where the lateral lobes project toward the rectum, the perineal route should be the preferable one.

TWILIGHT SLEEP.*

By MILLICENT COSGRAVE, M.D., San Francisco.

Probably no subject interesting to physicians has received so much attention from the laity during the past twelve months as twilight sleep. It has cast into the shadow vivisection, compulsory vaccination, and all other bogies of the lay press.

The laity cannot understand the prejudice of physicians against it, and many lay it to the fact that it is "made in Germany"; others, that it has been so widely advertised in magazines and by physicians who wished to profit by lay advertising that the more ethical members of the profession refused to try it.

Of course, our American experience with the Friedman tuberculosis "cure" has taught us to fight shy of the advertising physician, no matter how high his standing in his own country. I remember when Professor Adolph Lorenz was here in 1902, that his attitude towards reporters and his desire to facilitate their opportunities in acquiring news was widely and more or less justly deplored by the profession at large.

Recently during my visit in New York, the New York *Times* got hold of a new serum cure for cancer that is being tried by some of the professors of experimental medicine in Cornell University, and wrote it up in a most sensational manner. The men in question threatened reprisal and were told by the *Times* people to go ahead, that they, *"The Times,"* would gladly pay the costs.

Twilight sleep, it seems to me deserves better treatment at our hands. One can hardly say it is in its experimental stage when one considers that Kroenig and Gauss have been using this method in Freiburg for the past ten years, have delivered 3000 women successfully, and published reports of their work that prove it to be humane, satisfactory, and safe. Kroenig in the *Journal of Surgery, Gynecology and Obstetrics,* May 1914, makes a plea for the use of Dämmerschlaf, especially in highstrung, modern nervous women, and states: "The patient has a perception of pain, but not an apperception. She still reacts to labor pains with an expression of pain, but afterwards has no recollection of the pain experienced." "We believe," he continues, "on a basis of our experience in which no detrimental results ever occurred for the mothers, that we are safe in recommending this drug (scopolamin morphine) as not dangerous for mothers. In some cases the pains may be slightly reduced, but our calculations show that the average duration of birth has increased one half-hour, a negligible amount."

Dr. Knipe, until recently adjunct professor of Obstetrics at the Postgraduate Hospital, New York, and at present attendant obstetrician at the Gouver-

* Read before the Cooper Clinical Society, May 3, 1915.

neur Hospital, in his article on "Twilight Sleep," December 1914, *American Journal of Obstetrics,* says in part: "The technic of twilight sleep is rendered difficult by the varying susceptibility of different people to scopolamine, and because of the necessity of continually testing the varying consciousness of the patient. The basis of successful twilight sleep is the proper use of the memory tests. These tests must be uninterrupted throughout labor, and are the best and *only* method of gaging the consciousness of the patient." Knipe also states that morphine must be used but once and then only in 1/8 of a grain dose. He says: "To properly carry out twilight sleep requires the use of a special chart in which the time, the number of injections, symptoms of the patient, memory tests, the fetal heart, and the mother's pulse are noted." "The production of twilight sleep requires not only a technical knowledge of the use of scopolamin and morphine, but also good obstetrical judgment and an adequate understanding of obstetrical forces and conditions. It is for this reason that the method is best used by the obstetrician. It is easier to train a good obstetrician in the use of scopolamin and morphine than it is to make a good obstetrician out of one who may know of the induction of twilight sleep."

I think personally that many of the prejudiced expressions we have heard, too, are based on lack of obstetrical skill on the part of those handling the drug. I think we must all admit that many cases of still-birth are due to a lack of experience on the part of the obstetrician, especially in former years, when a practical knowledge of obstetrics was largely a matter of good luck.

The danger to the child. That the injection of scopolamin subcutaneously into the mother is absorbed into the circulation of the child is to be expected, and can be easily proved by the presence of the drug in the urine of the child at birth. Holzbach has proved the presence of the drug in the mother's milk and in the urine of the child. In the child the drug is quickly excreted, generally in fifteen minutes after birth, if small doses have been used. The effect of the drug in endangering the life of the child by lengthening labor which averages one hour more in primipara and one-half hour in multipara is of little moment when the drug is properly used.

Salzberger in Freiburg investigated the matter of dangers to the child, and his investigations proved that when properly given, scopolamin had no dangerous effects on the life, health, and development of the child. Gauss and Kroenig also state that they have followed the history of some of their babies, and report that there was no difference in the mortality of these babies nor in their morbidity than among those whose mothers had not received this treatment.

In *Modern Hospital,* October 1914, Knipe dwells at length on the necessity of quiet in the induction of twilight sleep and suggests that maternity wards in hospitals be furnished with padded rooms, silenced floors, etc. Whether this makes a great difference or not, I am not prepared to say. In the four cases I witnessed in the maternity wards of the Long Island College Hospital, there were several women in labor at the same time, no especial effort was made to induce quiet; of course the women were not in the same room, but you could hear their cries. Yet the twilight sleep patients did not appear to be disturbed in the least.

Polak, professor of Obstetrics and Gynecology in the Long Island College Hospital, in an article in the *New York Journal,* February 1915, states that he is convinced that there is no reason why Dämmerschlaf should not be caused in all women who show the physical signs of active labor, provided that the woman be under *continuous intelligent observation.* He continues: "It is distinctly a first stage procedure and should not be begun if the labor be far advanced; if such be the case the doses required will necessarily be greater, the danger to the patient obvious." . . . "This analgesia is particularly indicated in nervous women of the physically unfit type in their first labors," says Polak. For it is in this type of woman that labor has most often in ordinary practice to be artificially terminated, owing to the physical exhaustion so common at the end of the first stage of labor before cervical dilatation is complete, or in the second stage when no more force can be brought upon the uterus by the abdominal muscles; and it is with this class that scopolamin morphine will give the best results, because by its use we are able to attain full dilatation of the cervix by the operation of the physiological factors, i. e., bag of waters, and force of the uterine contractions before the patient begins to show signs of physical fatigue.

McPherson and Harrod, attending surgeons in the New York Lying-In Hospital in the *Bulletin* of that hospital, February 1915, report the results in 100 cases in which they used scopolamin morphine, and 100 untreated cases. They secured complete amnesia in 66 women, partial amnesia, hazy recollection with distinct alleviation of the patient's suffering in 10. Of the remaining, 20 did not respond to the drug at all, and four were too far advanced in labor to derive any benefit. It is noteworthy to remark that practically all of the successful cases were those in which the treatment was started three to seven hours before the termination of labor. "The percentage of successful cases is increasing," they report, "as we become more familiar with the treatment."

"The disadvantages claimed by those opposing the treatment are chiefly two,—fetal asphyxia and postpartum hemorrhage. It is evident that these are the result of faulty technic.

"In our cases the tendency to hemorrhage seemed less rather than greater. As to the fetal asphyxia, in the 100 cases delivered without scopolamin, there were seven instances of asphyxia at birth, two requiring tubs and artificial respiration for twenty minutes. With the scopolamin babies, on the other hand, the majority cried at once without any evidence of being under a drug; eight were moderately apnœic, but quickly responded, and two required artificial respiration for 15 or 20 minutes. This asphyxia occurred in the cases where there was a delay of the head on the perineum. The average

duration was 16 hours in the untreated primipara, against 18 hours in the 100 treated.

Brodhead in the February *Post Graduate Magazine* reports that his personal experience is limited to 71 cases in which he has used the Siegel or routine method. His experience has made him conclude that twilight sleep is still in its experimental stage. But the Siegel method was used only on the fourth class patients in Freiburg and is considered there to be in its experimental stage. None of the Gauss-Kroenig records are based upon it.

In a discussion following Dr. Knipe's paper in the N. Y. Academy of Medicine, Dr. Abraham Rongy said that in a series of 230 cases, 80 of the children suffered from slight oligopnea; the first stage of labor was shortened, the second prolonged; as far as hemorrhage was concerned there did not seem to be any appreciable effect; amnesia was obtained in 80% of the cases.

Dr. Harrod said "that when the Gauss-Kroenig method was used, the general effect on labor was a rather more rapid dilatation of the cervix than usual, followed in a certain number of cases by delay on the perineum. This delay, if the fetal heart were watched, was of distinct benefit to the mother, resulting in fewer perineal lacerations. Getting the patient under the drug must be gradual with the minimal dose to produce the effect. That any harm that came to the child was due to bad obstetrics, not to the scopolamin treatment. Even better obstetrical knowledge and judgment than usual are necessary, and abdominal and vaginal examinations must be carried on as in any labor."

Dr. George Shears, N. Y. Polyclinic, stated that in the cases which had come under his notice the effect on the mother was wonderful; there was no hemorrhage, no relaxation, the mothers recovered quickly. But the various factors involved were of danger to the baby, and that to state that the baby was better under the several factors involved was to put too much strain on the imagination, and after all the chief object in pregnancy is the baby.

Dr. Knipe and Dr. McPherson do not believe that labor is prolonged, for in their series of cases the total duration of labor was reduced. They say that if those who said that mothers did not gain much, and babies were endangered, they should hear the women who had received it enthuse over it.

I must say I had similar experiences. The "Mrs. Boyd" who has caused much of the prejudice against twilight sleep in her efforts to pass her knowledge on, and who wrote the first magazine articles, started a society for the propagation of twilight sleep, and has more recently written a book on it. I met this little woman and her description of her experience of childbirth under Gauss and Kroenig in Freiburg sounded like a marvelous fairy tale, and would have impressed the most skeptical.

Dr. Cragin is perhaps one of the strongest antagonists to twilight sleep. He said there were possibilities of good in the method, but that the practice of twilight sleep was not so easy a matter as described in the magazines, and if anybody thought that the method was possible by the general practitioner with small experience, he was mistaken. He found that some of the patients were decidedly excitable and tried to get out of bed, and that prevented asepsis and increased the danger of infection.

The question of the safety and desirability of the use of "Dämmerschlaf" seems to me to be:

1. That the man or woman using it must be an experienced and careful obstetrician.
2. That it must be given in a hospital or in a private home where a whole hospital force may be employed.
3. That the obstetrician be within call.
4. That the proper conditions be observed and the Gauss-Kroenig technic used.

The *technic of Siegel,* which was what De Lee of Chicago saw when he visited Freiburg, and which is the method chiefly used in America, is one of the reasons for the failure of twilight sleep in many instances. In this method every patient is treated similarly and the doses are given in a routine fashion; too much narcophen is used and when the second stage is prolonged, frequently pituitrin is also used, which is another factor which may result in harm to the baby.

Dr. Seantt, obstetrician at the University of Minnesota, quotes twelve cases and concludes that twilight sleep should not be administered at random, that the dose of hyoscin and morphine should be given cautiously and in minimal amounts, that the subject under its influence should be closely watched by an experienced attendant, and lastly that the other advantages should be employed to their fullest extent.

Dr. De Lee of Chicago states in *Modern Hospital* that he observed ten or twelve cases in the Frauenklinik in Freiburg in the service of Dr. Siegel. In these there were four forceps cases and one craniotomy. He says the proper conduct and treatment requires a large force of physicians and nurses. The fetal heart sounds must be watched constantly and the patient must not be left alone, especially if delirious. "Indeed," he writes, "I had to admit that when the method worked well it was ideal. In a well-equipped maternity hospital in the hands of an experienced obstetrician, these drugs may be administered with a certain degree of safety, but its general use throughout the country would result in an appalling infant mortality and an enormous maternal mortality and morbidity."

In the five cases I saw in the Long Island College Hospital the Gauss-Kroenig method was the one used. The patients were placed in a semi-darkened room and no conversation was indulged in. The first dose was administered when there were regular forceful, even painful contractions of the uterus, the pains coming about five minutes apart. It consisted of an injection of 1/150 of gr. scopolamin and 1/68 of narcophen. Three-quarters of an hour later the patient was shown some object with which the test was made, and then thirty minutes later was shown the same object. If at this time the patient remembered having seen the object before, which is usually the case, a second

injection was given, consisting of 1/150 of scopolamin but no narcophen. (If there is amnesia after the first dose, no scopolamin is given until further tests show a return of memory.) About two hours later, the memory tests having been used every thirty minutes, and the condition of the pulse, fetal heart, and pupil noted, a third dose consisting of 1/400 of scopolamin was given, and as a rule five doses were the usual amount used. The first patient (a primipara) was very quiet during the whole course of labor. After the second dose her face was flushed and she complained of dryness and asked for water. That she felt her pains was evident, for she would squirm, bear down and throw herself from side to side while they lasted. With her the second stage was not prolonged, and the head came very rapidly and forcefully on the perineum. Dr. Polak, in order to avoid a laceration, cut cleanly through the middle of the perineal body and delivered the baby, which was neither blue nor apnœic, but cried lustily immediately. After the delivery of the placenta the perineum was sewed up. The patient had no recollection of the birth the next day.

The second case was in the Brooklyn City Hospital, and the room and setting were admirably adapted for the induction of twilight sleep. The room was painted in a deep shade of green, the lamp shaded, and at the head of the bed on one side sat the doctor, on the other the nurse. She was in active labor, the pains coming regularly. Every twenty minutes her memory was tested and five doses of the drug in all were given. She slept between the pains, and during many of them seemed to rouse slightly and groaned a little. The baby cried instantly and required no treatment and was not blue.

The third case was a multipara, a very noisy woman. She came to the Long Island College Hospital in active labor and was more advanced than the former cases. She did not respond so readily, but shouted and screamed during her pains, talked and mumbled between them. Her childbirth to the onlooker was very disturbing, for she seemed in agony, but next day claimed she had not remembered anything.

The fourth case (a primipara) age 20, a strong husky girl, came into the hospital screaming and most noisy. For one-half hour after her first dose she remained noisy, but after that became quiet and slept between her pains. In the last stages she was rather delirious and difficult to handle, and was delivered with forceps, the cord being tied around the child's neck twice. This baby did not cry immediately and was dipped in hot and cold water quite unnecessarily, I thought, for in a few moments, as soon in fact as he was put in the water he shrieked and kept it up.

The fifth case was also a primipara, a case that would make you want to use twilight sleep. It was like the second and third case where everything was ideal. The patient responded to the drugs. She was sufficiently intelligent to co-operate and the baby was a fine, strong, husky child who showed no evidence of scopolamin.

In all these cases, the physician was present during the entire time, as were the nurses. Everything was quiet in the room and an atmosphere of peacefulness prevailed, so different from the ordinary case. These women were all peasants and chiefly foreigners, and when I think of them and remember some of my experiences with foreigners of a similar class here, I rejoice that such a drug may be used on the very poor in hospitals and on the very rich wherever they may be. The great middle class will not be benefited by it unless they come to hospitals, for they will not be able to afford to pay for the physician's time. In one or two of the really old hospitals in New York where they are using the scopolamin treatment in childbirth, patients are paying $70 and $80 for small dark rooms with the accompanying discomforts and are not complaining.

That women feel the pain is evident from their expression at that time, but they use their forces better, sleep between pains, bear down fearlessly, help themselves, and remain amiable and pleasant throughout. I do not believe there is any possibility of using the treatment outside of a hospital, but I do think that in the case of the modern, nervous woman who shrinks from maternity, there will be a lessening of race suicide. I do not feel that it is a panacea for all the troubles of childbearing, but I do feel that we should give it a fair trial using the Gauss-Kroenig technic, and in the most experienced hands of an obstetrician of good judgment; not one who will make up his mind beforehand, and from his conclusions on experience based on 10 or 12 cases observed in a foreign clinic or in the hands of an unskilled obstetrician.

I quite agree with the physicians who, if they are convinced that scopolamin increases the number of stillbirths, refuse to use it. For our statistics show a very large percentage. In New York in 1912 the *average per thousand* was 46, in San Francisco 44.2. In 1906 in New York per 1000, 56. In foreign countries the smallest percentage of stillbirths was in Austria-Hungary. There the greatest number of stillbirths were among illegitimate children.

In Sweden,	28	legitimate,	87	illegitimate.
In Prussia,	39	"	54	"
In Belgium,	43	"	58	"
In France,	42	"	78	"
In Austria,	24	"	38	"
In Hungary,	14	"	30	"

1916—STATE SOCIETY—FRESNO.

The Council of the State Society, at a meeting held September 11th, discussed the various places which had extended invitations for the Annual Meeting of 1916. After carefully considering the various points in relation to the best interest of the Society and the profession as a whole, a ballot was taken which resulted in the selection of Fresno. The meeting will be held in the third week of April, 1916, at Fresno, and we are assured of ample and satisfactory hotel accommodations. It goes without saying that a royal welcome will be extended to all our members by the profession of Fresno.

Further information will be published later on in the Journal.